

Abstract

Fluid pump control modes in a medical perfusion system include a Back Off Response Mode, a Flow Servo Mode, a Pressure Servo Mode, and a Master-Slave Servo Mode. In the Back Off Response Mode, pump's speed is decremented to a new speed when an excessive flow rate or pressure condition is detected. The new speed is maintained until an additional decrement is required or until the Back Off Response Mode is exited. In the Flow Servo Mode, a pump's speed is controlled to maintain a fluid flow rate indicated by a user as a setpoint. In the Pressure Servo Mode, a pump's speed is controlled to maintain a pressure indicated by the user as a setpoint. In the Master-Slave Servo Mode, a slave pump receives an indication of a master pump's speed, and the slave pump speed is controlled to maintain a specified percentage of the master pump's speed.